NOTES AND MEMORANDA

English Vital Statistics

In the second quarter of the year, according to the Registrar-General's *Quarterly Return,* the birth rate was exactly the same as in 1929, the number per 1,000 of the estimated mid-year population (of 1929) being 17.2, the lowest rate yet recorded in any year, except 1919, since the establishment of civil registration. The death rate, 11.3 per 1,000, is 1.7 per 1,000 below that recorded in the second quarter of last year. The natural increase was 58,859, as compared with 50,851, in the second quarter of 1929. Infant mortality touched a very low figure, 57 per 1,000 births, which is 11 per 1,000 below the average of the ten preceding second quarters and 2 per 1,000 below that of 1927, the lowest previously reached. Marriages during the first quarter of the year dropped from the 11.2 per 1,000 of 1929 to 10.0—a fall which is probably a reflection of the unemployment situation.

The birth rate of London during the second quarter of this year was below that of the whole country, being 16.3 which is .1 lower than last year.

E. M.

The Inheritance of Longevity

Several recent American reports on this subject are of interest to eugenists, and we take the first from the June issue of the *Statistical Bulletin* of the New York Metropolitan Life Insurance Company:

> "Persons with long-lived parents have an average lifetime at least two or three years greater than those with a poor maternal longevity. This observation is based on two investigations—one conducted recently by the Statistical Bureau of the Metropolitan Life Insurance Company and the other relating to the experience on nearly 300,000 men insured in thirty-four life insurance companies of the United States and Canada during the years 1869-99, who were traced to their policy anniversary in 1900. The recent study was based on the insurance history of over 70,000 white men insured in the Metropolitan Life Insurance Company during the years 1899 to 1902 and traced to their policy anniversary in 1928.
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> "In both studies the mortality of applicants with long-lived parents was distinctly lower than those with short-lived parents, at all attained ages under observation. On the average, the death rate of those with favourable parental longevity records was nearly 20 per cent. less than in the other group, but at some ages, as much as 30 per cent. less. These differences were found consistently when the material was studied in greater detail according to the ages of the insured at the time they applied for insurance. Moreover, we know that persons with an inferior parental longevity were more carefully selected for insurance than those with long-lived parents, so that in all other respects they are better risks, on the average, than are those with a more satisfactory parental record. Were it not for this compensating factor, the differences in mortality would be greater than herein reported.
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> "These differences in mortality between the groups resulted in differences in their expectations of life. At age twenty-five, those with long-lived parents had an expectation of life nearly two and one half years greater than those with short-lived parents. These differences in favour of those with long-lived parents continued throughout life in both experiences, although they grew smaller with advancing age. Even at age sixty, the life expectancy of those whose parents had a superior longevity was over a year greater than that of the other groups. It should be remembered, too, that these differences are minimal because of the more rigorous selection by the insurance companies of those with short-lived parents.

"The results of these studies confirm then the common belief that the duration of life depends, in part, on heredity. Earlier studies have yielded results in line with those of the present one, but criticism of the methods or the data used has cast some doubt on conclusions drawn from previous investigations. Moreover, for the first time the present study makes it possible to express the results in a form that is simple and easily understood. The differences in mortality and expectation of life in favour of persons with long-lived parents are clear-cut and show conclusively the effect of heredity on longevity. The gain in expectation of life from good heredity is, however, not as large as that obtained by the improvement in social and health conditions in recent years, and much less than that still attainable by such means. From the point of view of longevity, environmental influences are still more powerful than heredity, important as that may be."

The last two sentences might be a little misleading to non-biological readers—such as those of the *Statistical Bulletin*. They do not mean that 'environment counts for more than heredity' in longevity—or any other character, for that matter—but only that the improvement of an adverse environment effects greater changes in the mean length of life (we take it) than would the selection of the long-lived—which seems highly reasonable. If this interpretation is not correct, we are puzzled.

With reference to this subject, readers may remember a brief note in last October's REVIEW (p. 235) on Professor C. H. Forsyth's article in *Science* on the decline of the average length of life in America—"In 1890 the line of life swoops vigorously up, in 1927 it sags dispiritedly down." It is therefore interesting to read a further article of his, "The Decline in the Average Length of Life," in the May number of *Human Biology*, confirming the previous study. Professor Forsyth is extremely cautious in interpreting his data, which are now very full—and incidentally include those of the Metropolitan Life Insurance Company itself—but there seems little room for doubting that American longevity is decidedly on the decline. Considering the immense improvements in American economic and living conditions during the last thirty years, it is difficult to reconcile the two cryptic sentences in the *Statistical Bulletin* with these further evidences of a decline in longevity. On the contrary, it seems more reasonable to suggest—as we did in our previous note—that environmental improvements have now done all, and more than all, they can to increase the *average* length of life, and that "those weaklings who thirty years ago only figured in the birth and infant mortality records are now just enabled to live long enough to die in what should be their prime," and so to lower that average.

Those who make a hobby of longevity, so to speak, will be interested in another report from America, in the September *Eugenical News*, which runs:

"There recently came to the United States a Kurd by the name of Zaro Agha, resident of Istanbul, who claims to be the oldest man in the world and says he is 156 years of age. In the New York *Times* for July 25, Mr. Arthur Hunter, chief actuary of the New York Life Insurance Company, took issue with the claim and, being a student of longevity, said that from his own evidence no human beings have lived longer than 106 years. In his opinion the Turk was certainly not 100 years old and probably not over 90. Mr. Hunter has investigated those individual claims for longevity which have been made from time to time for certain living or historic persons, and has failed to find sound evidence for any single case of reputed longevity greatly in excess of 100 years."

At the same time, it is difficult altogether to discredit some remarkably well authenticated cases in the past of extremely long-lived people—notably that of the famous Scandinavian sea-captain of the seventeenth and eighteenth centuries, whose name unfortunately escapes us at the moment of writing.

Perhaps Mr. Hunter will forgive us for suggesting that, as a good citizen of the great 'record' breaking nation, he could scarcely admit the claim of a mere Kurd—whose life, we have recently heard, has been gravely imperilled by a New York motor accident, thus indicating that not the stoutest genetic longevity can withstand the onslaught of a civilized environment.

E. M.